

Economic Decision-Making

Part I: House Cleaning

As an after school job, you have started a house-cleaning business with your friend Raymond. The chart below lists the two main services your new business provides and how long it takes each of you to complete the service. Use the information to make decisions about how to maximize your productivity and thus make the most profit for your efforts. You and Raymond are planning to work for 3 hours a piece this afternoon

	You	Raymond
Vacuum per house	60 minutes	45 minutes
Wash the dishes and do the laundry per house	30 minutes	45 minutes

- If you choose to vacuum for the 3 hours, how many houses worth of dish/laundry would you forgo? This is your **opportunity cost** of vacuuming in terms of dishes/laundry.
- If you have Raymond vacuum a house for the 3 hours, how many houses worth of dish/laundry would you forgo? This is your **opportunity cost** of vacuuming in terms of dishes/laundry.
- If you choose to do the dishes and laundry for the 3 hours, how many houses worth of vacuuming would you forgo? This is your **opportunity cost** of vacuuming in terms of dishes/laundry.
- If you have Raymond do the dishes and laundry for the 3 hours, how many houses worth of vacuuming would you forgo? This is your **opportunity cost** of vacuuming in terms of dishes/laundry.
- One way to increase productivity is through **specialization**, or having workers focus on the task in which they have the lowest opportunity cost for.
 - Who should specialize in vacuuming?
 - Who should specialize in washing dishes and doing the laundry?

Part II: Factory Work

Congratulations! After proving yourself as a keen young entrepreneur, you have been hired by a local factory as a manager. Assume that a business firm finds that its profit will be at a maximum when it produces \$40 worth of their product. Suppose also that each of the three techniques shown in the following table will produce the same amount of output.

Resource	Price of Resource	Technique #1	Technique #2	Technique #3
Labor	\$3	5	2	3
Land	\$4	2	4	2
Capital	\$2	2	4	5
Entrepreneurship	\$2	4	2	4

- With the resource prices shown, which technique will the firm choose? Why?
- Will production entail profit or losses?

- c. Assume now that a new technique, technique 4, is developed. It combines 2 units of labor, 2 of land, 6 of capital, and 3 of entrepreneurial ability. In view of the resource prices in the table, will the firm adopt the new technique? Explain your answer.
- d. Suppose that an increase in the labor supply causes the price of labor to fall to \$1.50 per unit, all other resource prices remaining unchanged. Which technique will the producer now choose? Explain your answer.

Part III: Economic Consultant

You have been acknowledged as an economic prodigy and will be selling your mad skills as a business consultant to Widget Inc. Answer the following questions using the following data which shows the current costs for resources used for producing 2000 units of a particular commodity:

Resource	Resource Price (per month)
Labor	\$30,000
Natural Resources	\$40,000
Capital	\$20,000
Entrepreneurial Ability	\$100,000

- a. Currently the Widget© is selling for \$100 a piece. Is Widget Inc. making a profit or taking a loss by producing? How large is the profit or loss?
- b. There are a number of proposal for how to increase revenues at Widget©. Choose which of the following proposals you think would be the most economically efficient and explain why.

Proposal 1: Widget Inc. is considering doubling the number of workers. The new workers would add \$30,000 to the cost of labor. The new workers would be able to increase the number of widgets by 1,500.

Proposal 2: Widget Inc. is considering hiring a new CEO with better managerial skills the current one. The new CEO would add \$50,000 to the cost of entrepreneurial ability. The new CEO would be about the increase the number of widgets by 1,000.

Proposal 3: Widget Inc. is considering buying a new piece of capital equipment. The machinery would add \$50,000 dollars to the cost of capital, but would replace the need for multiple workers reducing the cost of labor by \$15,000. The new capital would be able to increase the number of widgets by 1,700.

- c. What are possible costs and benefits for each of the proposals beyond the actual financial profit?

Sample Test Questions

1. What factor of production is a tractor?
 - A land
 - B labor
 - C capital
 - D entrepreneurship
2. What is the alternative you face if you decide to do one thing rather than another called?
 - A tradeoff
 - B opportunity cost
 - C incentive
 - D variable cost
3. What is the degree to which resources are being used efficiently to produce goods and services called?
 - A specialization
 - B productivity
 - C division of labor
 - D consumption
4. What are the gifts of nature that make production possible?
 - A consumer goods
 - B human capital
 - C natural resources
 - D input
5. Which would not be considered as capital by an economist?
 - A a share of corporate stock issued by General Motors
 - B an automobile used by General Electric
 - C a crane used by a building contractor
 - D a razor used by a barber
6. Which would not be classified by economists as land?
 - A two thousand acres of virgin forest
 - B a hydroelectric dam
 - C crude oil reserves
 - D iron ore deposits
7. What is the term for the individual that brings together the other economic resources necessary for production?
 - A government units
 - B entrepreneurs
 - C corporate shareholders
 - D the managerial elite
8. The fundamental economic problem is that resources are finite, but economic wants are insatiable. What terms best describes this problem?
 - A trade-off
 - B productivity
 - C demand
 - D scarcity
9. Which factor of production include any form of human effort exerted in production?
 - A land
 - B labor
 - C capital
 - D entrepreneurship